

REMARKS

This submission is in response to the Final Office Action dated May 25, 2008 (the “Office Action”). Claims 1-5, 7-13, 15-39 are pending in the application. Applicants have amended claims 1, 5, 11, 16, 26 and 33. Applicants have also added new claims 38-39. No new matter has been added.

The Office has objected to the amendment filed on March 7, 2008 under 35 U.S.C. 132(a) because it allegedly introduces new matter into the disclosure. Specifically, the Office objects to the limitation “automatically collecting management information” of claims 1, 5, 11, 16, 26 and 33 as not being fully supported in the original specification. In response, Applicants have removed this claim limitation without prejudice. Applicants wish to point out that the recitation of management agents responsible for performing network management functions can reasonably be construed as supporting “automatically collecting management information”. Accordingly, Applicants reserve the right to re-introduce this claim element in the future. Support for this claim limitation can be found in the specification at paragraph [1017].

Claims 1-5, 7-13 and 15-37 are Allowable

The Office has rejected claims 1-5, 17-13 and 15-73, at paragraph 5 of the Office Action, as being unpatentable over U.S. Pub. No. 2006/0098670 (“Voit”) in view of U.S. Pub. No. 2007/0097884 (“Chewning”). Applicants respectfully traverse the rejections.

A. Claims 1-4

The cited portions of Voit and Chewning, individually or in combination, do not disclose or suggest the specific combination of claim 1. For example, the cited portions of Voit and Chewning fail to disclose or suggest an enhanced network management system comprising a connection to a wide area network, the connection configured to receive management information via a plurality of virtual connections from a corresponding plurality of data communication nodes, wherein each node is configured to monitor equipment fault information

for customer owned equipment and service level information for provider owned connections, and wherein each data communication node couples a particular local area network to the wide area network, as in claim 1.

In contrast to claim 1, the cited portions of Voit fail to disclose or suggest a network management system comprising a connection to a wide area network, the connection configured to receive management information via **a plurality of virtual connections** from a **corresponding plurality of data communication nodes**, as in claim 1. In contrast to claim 1, the data connection node taught in Voit is **a single data connection node**. Specifically, Voit teaches the use of a VSI ATM switch (**i.e., a single switch**) participating as a layer 2 (ATM) peer for the purpose of performing layer 2 testing to other layer 2 elements in the network.

Further, the cited portions of Voit fail to disclose **wherein each node is associated with a corresponding local area network**, as in claim 1. Voit describes an ADSL-based local access data network or "ADN" which provides access to two different network domains for communication services. The two network domains are logically separate. In most implementations, the first domain may be considered as a long distance or wide area domain, whereas the second domain is a **local network domain**. See Voit at par [0087].

The Office does not cite portions of Chewning for disclosing these elements of claim 1. The Office cites Chewning for teaching a network management system that **automatically** collects management information in accordance with claim limitations directed to automatically collecting management information filed with the amendment on March 7, 2008. As noted above, Applicants have amended the independent claims to remove this claim limitation without prejudice.

Applicants respectfully submit that a *prima facie* case of obviousness does not exist based on the combination of the cited portions of Voit and Chewning since all of the elements of claim 1 are not found in the combination of references. Applicants respectfully request the rejection to claim 1 be withdrawn, and Applicants submit that claim 1 is allowable.

Claims 2-4 depend from claim 1, which Applicants have shown to be allowable. Accordingly, claims 2-4 are also allowable, at least by virtue of their dependence from claim 1.

B. Claims 5, 7-10

The cited portions of Voit and Chewning, individually or in combination, do not disclose or suggest the specific combination of claim 5. For example, the cited portions of Voit and Chewning fail to disclose or suggest data collected via the interface including management information regarding a service level for a plurality of provider owned transparent connections for carrying data traffic between a plurality of local area networks and the wide area network, wherein the transparent connections are between the plurality of local area networks and the wide area network, as in claim 5.

In contrast to claim 5, the cited portions of Voit describe a network management system comprising a data router having a first interface coupled to a wide area network. See Voit, Figure 7b. Voit teaches that data collected via the first interface includes management information regarding a service level of a first network for carrying data traffic between a local area network and the wide area network. See Voit, pars. [0172] – [0174], [0180] and [0195]. However, the cited portions of Voit fail to disclose or suggest data collected via the interface including management information regarding a service level for a plurality of provider owned transparent connections for carrying data traffic between a plurality of local area networks and the wide area network, wherein the transparent connections are between the plurality of local area networks and the wide area network, as in claim 5. The Office does not cite portions of Chewning for disclosing this element of claim 5.

Further, the cited portions of Voit and Chewning, individually or in combination, do not disclose or suggest a data network report collector for providing analysis of management information, providing notification of equipment failures, and providing administration of service level agreements for customers, as in claim 5.

In contrast to claim 5, the cited portions of Voit describe a test server or web server 81 (See Voit, par. [00169]). Voit teaches that for purposes of the monitoring, surveillance and

quality assurance methodology, the carrier or other party assessing network operations will operate at least one server from a local services domain (e.g., web server 81 and test server 83). The web server 81 **provides a point of user interface** accessible via standard browser software and the relatively public vertical services domain 13. The test server **runs certain tests and/or coordinates tests and status reporting functions by other elements**, from its location on the secure network services domain 33. It is respectfully submitted that providing a point of user interface (web server 81) and running certain tests and/or coordinating tests and status reporting functions by other elements (test server 83) is different than a report collector for providing analysis of management information, providing notification of equipment failures, and providing administration of service level agreements for customers, as in claim 5.

Applicants respectfully submit that a *prima facie* case of obviousness does not exist based on the combination of the cited portions of Voit and Chewing since all of the elements of claim 5 are not found in the combination of references. Applicants respectfully request the rejection to claim 5 be withdrawn, and Applicants submit that claim 5 is allowable.

Claims 7-10 depend from claim 5, which Applicants have shown to be allowable. Accordingly, claims 7-10 are also allowable, at least by virtue of their dependence from claim 5.

C. Claims 11–13 and 15

The cited portions of Voit and Chewing, individually or in combination, do not disclose or suggest the specific combination of claim 11. For example, the cited portions of Voit and Chewing fail to disclose or suggest collecting management information for a transparent connection carrying encapsulated data traffic; identifying equipment failure information using the collected management information, separately identifying service provider service level information; using the collected management information, and presenting service level information and detected equipment failures to a customer to allow the customer to differentiate between network outages caused by customer equipment failures and provider service events, as in claim 11.

In contrast to claim 11, the cited portions of Voit describe a server running a test application that communicates with an electronic management server associated with a gateway router, thus enabling the server to obtain status information regarding the subscriber's service and related transport services. See Voit, par. [0178]. It is respectfully submitted that obtaining status information regarding the subscriber's service and related transport services is different than identifying equipment failure information using the collected management information, separately identifying service provider service level information, as in claim 11. Further, Voit is silent with respect to presenting service level information and detected equipment failures to a customer to allow the customer to differentiate between network outages caused by customer equipment failures and provider service events. The Office does not cite portions of Chewning for disclosing this element of claim 11.

Applicants respectfully submit that a *prima facie* case of obviousness does not exist based on the combination of the cited portions of Voit and Chewning since the Office has failed to show that all of the elements of claim 11 are found in the combination of references. Applicants respectfully request the rejection to claim 11 be withdrawn, and Applicants submit that claim 11 is allowable.

Claims 12-13 and 15 depend from claim 11, which Applicants have shown to be allowable. Accordingly, claims 12-13 and 15 are also allowable, at least by virtue of their dependence from claim 11.

D. Claims 16 - 25

The cited portions of Voit and Chewning, individually or in combination, do not disclose or suggest the specific combination of claim 16. For example, the cited portions of Voit and Chewning fail to disclose or suggest a network management system configured to collect management information for one or more transparent Digital Subscriber Line (DSL) connections carrying encapsulated Frame Relay packets **between a plurality of local area networks and a wide area network**, the Digital Subscriber Line (DSL) connections being intermediate between **the plurality of local area networks** and the wide area network, as in

claim 16 (Emphasis Added).

In contrast to claim 16, the cited portions of Voit describe the provision of digital subscriber line data communication between **an access router (AR)** and **a number of customer premises**, using a variety of line technologies. The access router (AR) of Voit also serves business customer router equipment, using a variety of fast frame/cell packet technologies and optical fiber (SONET). The access router (AR) provides the routing functions to and from the wide area internetwork and the vertical services domain. See Voit, pars. [0156 – 0158]. It is respectfully submitted that collecting management information for one or more transparent Digital Subscriber Line (DSL) connections carrying encapsulated Frame Relay packets **between a plurality of local area networks and a wide area network** is different from an access router (AR) providing routing functions to and from a wide area network directly serving customer and business premises. The Office does not cite portions of Chewning disclosing this element of claim 16.

Applicants respectfully submit that a *prima facie* case of obviousness does not exist based on the combination of the cited portions of Voit and Chewning since all of the elements of claim 16 are not found in the combination of references. Applicants respectfully request the rejection to claim 16 be withdrawn, and Applicants submit that claim 16 is allowable.

Claims 17 - 25 depend from claim 1, which Applicants have shown to be allowable. Accordingly, claims 17 – 25 are also allowable, at least by virtue of their dependence from claim 16.

E. Claims 26 - 32

The cited portions of Voit and Chewning, individually or in combination, do not disclose or suggest the specific combination of claim 26. For example, the cited portions of Voit and Chewning fail to disclose or suggest a network management system comprising a report collector for providing analysis of management information, providing notification of equipment failures, providing administration of service level agreements for customers, and a

middleware server configured to collect management information from a plurality of data communication nodes for a transparent Digital Subscriber Line (DSL) connection between a wide area network and a plurality of local area networks, each local area network being associated with a corresponding data communication node, the management information being collected for the transparent Digital Subscriber Line via a Frame Relay network, as in claim 26.

In contrast to claim 26, the cited portions of Voit describe a web server (report collector) and a test server (middleware server). The web server provides a point of user interface accessible via standard browser software and the relatively public vertical services domain. See Voit, par. [0169]. The test server runs certain tests and/or coordinates tests and status reporting functions by other elements, from its location on the secure network services domain. It is respectfully submitted that the respective functions performed by the web server and test server are different than the functions performed by the report collector and middleware server, namely, providing analysis of management information, providing notification of equipment failures, providing administration of service level agreements for customers, and collecting management information from a plurality of data communication nodes for a transparent Digital Subscriber Line (DSL) connection between a wide area network and a plurality of local area networks, where each local network is associated with a corresponding data communication node, as in claim 26.

Applicants respectfully submit that a *prima facie* case of obviousness does not exist based on the combination of the cited portions of Voit and Chewning since all of the elements of claim 26 are not found in the combination of references. Applicants respectfully request the rejection to claim 26 be withdrawn, and Applicants submit that claim 26 is allowable.

Claims 27 - 32 depend from claim 26, which Applicants have shown to be allowable. Accordingly, claims 27 - 32 are also allowable, at least by virtue of their dependence from claim 26.

F. Claims 33-37

The cited portions of Voit and Chewing, individually or in combination, do not disclose or suggest the specific combination of claim 33. For example, the cited portions of Voit and Chewing fail to disclose or suggest collecting management information **from a plurality of data communication nodes** for a transparent Digital Subscriber Line (DSL) connection **between a wide area network and a plurality of local area networks, each local area network being associated with a corresponding Frame Relay data communication node, the DSL connection** carrying encapsulated Frame Relay packets between **the plurality of Frame Relay data communication nodes**, as in claim 33.

In contrast to claim 33, Voit describes, by way of example, at paragraphs [0197] – [0205] in view of Fig. 7b, a network (7b) for performing monitoring, surveillance and quality assurance. In accordance with the description, the web server 81 or the test server 83 periodically receives status information, of a general nature, from the elements of the data network. For example, the DSLAMs 17, the VSI switches 19, any ADN switches and the gateway router(s) 29 periodically report whether or not they are operative. It is respectfully submitted that with respect to the disclosed configuration of Voit, there is no teaching or suggestion of collecting management information **from a plurality of data communication nodes** for a transparent Digital Subscriber Line (DSL) connection **between a wide area network and a plurality of local area networks, each local area network being associated with a corresponding Frame Relay data communication node, as in claim 33.**

Further the cited portions of Voit fail to disclose differentiating between a network outage caused by customer equipment failure and a service provider service level event using the management information, as in claim 33. The Office Action cites paragraph 205 of Voit for allegedly teaching this claim element. In contrast to claim 33, the disclosure of Voit at paragraph 205 does not teach differentiation between a network outage caused by customer equipment failure and a service provider service level event using the management information, but instead merely teaches that once it is determined that connectivity is established over the line to the DSLAM 17 to the local services domain, and the user is still experiencing slow service, further tests may be selected by the user offered by the web server 81. It is respectfully submitted that establishing connectivity does not differentiate customer

equipment failures from service provider service failures.

Applicants respectfully submit that a *prima facie* case of obviousness does not exist based on the combination of the cited portions of Voit and Chewing since all of the elements of claim 33 are not found in the combination of references. Applicants respectfully request the rejection to claim 33 be withdrawn, and Applicants submit that claim 33 is allowable.

Claims 34 - 37 depend from claim 33, which Applicants have shown to be allowable. Accordingly, claims 34 – 37 are also allowable, at least by virtue of their dependence from claim 33.

CONCLUSION

Applicants have pointed out specific features of the claims not disclosed, suggested, or rendered obvious by the references applied in the Office Action. Accordingly, Applicants respectfully request reconsideration and withdrawal of each of the objections and rejections, as well as an indication of the allowability of each of the pending claims.

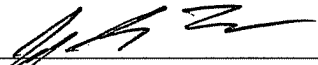
Any changes to the claims in this amendment, which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

The Examiner is invited to contact the undersigned attorney at the telephone number listed below if such a call would in any way facilitate allowance of this application.

The Commissioner is hereby authorized to charge any fees, which may be required, or credit any overpayment, to Deposit Account Number 50-2469.

Respectfully submitted,

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Date



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